

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences**

In re Patent Application of

Conf. No.: 1514

Johan RUNE et al.

Atty. Ref.: 2380-1323

Serial No. 10/583,958

TC/A.U.: 2617

Filed: June 21, 2006

Examiner: Kiet M. DOAN

For: ARRANGEMENTS AND METHOD FOR HANDLING MACRO
DIVERSITY IN UTRAN TRANSPORT NETWORK

* * * * *

October 18, 2010 (Monday)

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

REPLY BRIEF

Further to the Examiner's Answer mailed August 17, 2010, Applicants submit herewith Applicants' Reply. Although the Answer contains numerous pages of text, it still fails to address or overcome the arguments presented in the main Brief. A few deficiencies of the Answer are noted below.

Chen Does Not Contemplate Router

As noted in the main Brief, an aspect of the instant application is directed to distributing the macro diversity functionality to the routers located between the RNC and the Node Bs, which can result in significant cost savings. *Main Brief, p.4, l.4 – p.5, l.17.* The Examiner relies upon Chen (U.S. Publication No. 2003/0161284 A1) to disclose the router with such functionalities. *Answer, p.4, item 4.* But as pointed out in the main Brief, Chen does not

discuss routers. The term "router" is not found in Chen. Further, there is no discussion of any router-like devices.

The Examiner notes that Chen discloses using macro diversity, which is its main point of relevance to the instant application. Specifically, Chen states:

In soft handover, code division multiple access CDMA systems use so-called Macro Diversity to enhance coverage and call quality by determining which of two radio links gives the best quality. Macro Diversity is achieved when two or more base stations (Node B) are demodulating and decoding the uplink signal from a particular user terminal (user equipment UE). In this scenario, the serving radio network controller SRNC receives a frame (packet data unit PDU) from each base station (Node B) via the Iub interface, and if necessary the Iur interface. The serving radio network controller SRNC performs Frame Selection on the multiple received frames and passes on a single frame to the higher layer. On the downlink, the serving radio network controller SRNC performs frame distribution, which involves multiple copies of a single frame being distributed via each radio leg. A radio leg is a transport path from serving radio network controller SRNC to user terminal (user equipment UE) via a base station (Node B). *Chen [0054]*.

According to Chen, the serving RNC (or SRNC) performs frame selection (combining) on the uplink and performs the distribution (splitting) on the downlink. This is nothing more than the conventional macro diversity in which the functionality resides in the RNC. Chen never contemplates using routers to perform macro diversity.

It is difficult to fathom how Chen can be relied upon to disclose a router when Chen itself never contemplates the router or anything similar.

Kiiski Does Not Show Splitting Downlink Originating From RNC

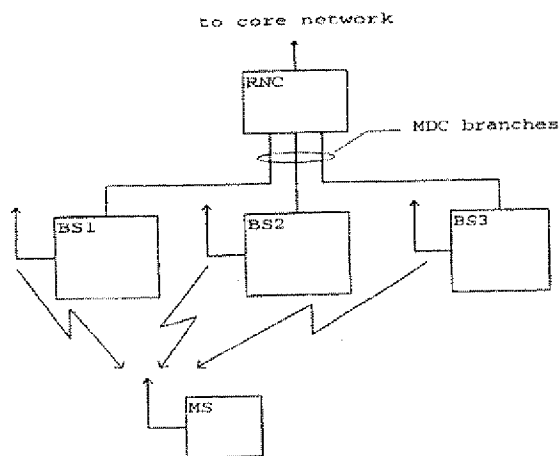
The Examiner relies upon Kiiski et al. (U.S. Publication No. 2002/0126664 A1) to disclose "splitting one input downlink DCH traffic flow

originating from the RNC into at least two output downlink DCH traffic flows.”

Answer, p.5. This necessarily requires that the router, which is separate from the RNC, receive a downlink flow that originates from the RNC. Kiiski fails.

First, as pointed out in the main Brief, Kiiski suffers from the same deficiency as Chen – Kiiski never discusses and never contemplates routers. Also like Chen, Kiiski discloses that macro diversity combining (MDC) is performed only at the RNC. *Kiiski, [0004], [0005], [0042].* Since routers are never even contemplated, it is again difficult to fathom how Kiiski (and Chen) can be relied upon to disclose a router that performs the macro diversity.

Second, also as pointed out in the main Brief, Fig. 1 of Kiiski (reproduced below) discloses nothing more than the conventional macro diversity functions residing at the RNC. As seen, the MDC branches originate from the RNC.



However, Kiiski never contemplates that any of the MDC branches originating from the RNC can be split. Thus, Kiiski cannot show splitting one input downlink flow originating from the RNC to two output downlink flows.

Cheng Is Insufficient

The Examiner relies upon Cheng et al. (U.S. Publication No. 2005/0043045 A1) to disclose “wherein the router is separate from both the RNC and the Node Bs, and wherein the router is in a communication path between the RNC and the at least one Node B.” *Answer*, pp.5-6. But as pointed out in the main Brief, Cheng has no relevance in as far as macro diversity is concerned, and is insufficient to correct the deficiencies of Chen and Kiiski.

Applicants acknowledge that Cheng could be interpreted to disclose the above-recited feature. *Cheng [0022]*. Applicants are well aware that the feature, in and of itself, is known as Cheng demonstrates. However, the feature should not taken in a vacuum as apparently have been done in the *Answer*.

When the feature is taken in proper context, it makes clear that the macro diversity functionality can be distributed to the nodes other than the RNC and the Node Bs (such as routers).¹

Cheng is insufficient to make up for the deficiencies of Chen and Kiiski. Chen and Kiiski provide no teachings or suggestions whatsoever that the macro diversity functionality can reside in nodes other than the RNC. Cheng is even more deficient in that macro diversity is never contemplated. Moreover, even if Chen, Kiiski and Cheng are combined, all macro diversity functionalities

¹ This is not to suggest that the RNC or Node B is excluded from performing macro diversity.

would still reside at the RNC alone, and routers would do no more than facilitate communication in the conventional manner.

Improper Hindsight

The Answer fails to rehabilitate the improper hindsight basis as it advances for modifying Chen. In making the reference combination, the Examiner cannot ignore the fact that Chen (and Kiiski) only contemplates macro diversity residing in the RNC, which actually teaches away. *KSR v. Teleflex*, 550 U.S. 398, 127 S.Ct. 1727 (2007) (“When the prior art teaches away from combining certain known elements, discovery of successful means of combining them is more likely to be non-obvious.”). Without the benefit of hindsight provided by the disclosure of the instant application, one of ordinary skill would not combine Chen, Kiiski and Cheng to arrive at the subject matter in which routers, other than the RNC and the Node B, perform the macro diversity function.

Summary/Conclusion

The Answer in general fails to address the deficiencies noted in the main Brief with regard to the combination of Chen, Kiiski, and Cheng. The Answer does not provide any further explanation regarding the deficiencies of the rejection of dependent claims 46, 52, 53, 54, 57, 59, 64, 70, 71, 72, 73, 75, 78, and 80 based on Chen, Kiiski, and Cheng. The Answer also does not provide any further explanation regarding the deficiencies of the rejection of dependent claims 55 and 74 based on Chen, Kiiski, Cheng, and Haggerty (U.S. Patent No.

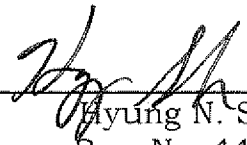
6,331,983). Rather than repeat those arguments here, the Board is respectfully referred to the main Brief.

For the reasons set forth in the main Brief, the final rejection should be reversed, and the application passed to allowance.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____


Hyung N. Sohn
Reg. No. 44,346

HNS/edg
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100